

The invention claimed is:

1. (Amended) An antenna mounting assembly for supporting an antenna on a pole
5 comprising:
 pole clamping means defining a pole receiving channel and being capable of
being attached to the pole received in the channel;
 support means for supporting the antenna relative to the clamping means, the
support means being mounted to the clamping means in a manner allowing movement of
10 the support means relative to the clamping means;
 support guide means coupling the clamping means and the support means for
guiding the support means along an arcuate path extending circumferentially around at
least a portion of the clamping means and around an axis parallel to an elongate axis of
the pole receiving channel; and
15 means for fixing the position of the support means relative to the clamping means.

2. The assembly of claim 1 wherein the support means includes a shell covering at least a portion of the clamping means.

3. The assembly of claim 2, wherein the shell supports the antenna relative to the clamping means. 35

4. The assembly of claim 2, wherein the shell is of a shape substantially generated by at least partially revolving a line segment around a main axis, the line segment being such that the shape further has two opposite openings positioned in line with the pole receiving channel. 40

5. The assembly of claim 2 wherein the shell extends circumferentially around the clamping means.

6. The assembly of claim 2 wherein the shell encloses the support guide means.

7. The assembly of claim 1 wherein the guide means 45 comprises a track defining the arcuate path and at least one guide element in contact with the track during movement of the support means along the arcuate path.

8. The assembly of claim 1, further comprising adjustment means for adjusting the position of the support means 50 along the arcuate path.

9. The assembly of claim 8, wherein the adjustment means includes an adjustable lead screw coupling the support means and the clamping means.

10. The assembly of claim 8, wherein the support means 55 includes a shell covering at least a portion of the clamping means.

11. The assembly of claim 10 wherein the shell encloses the position adjustment means.

12. The assembly of claim 1, wherein the fixing means 60 includes at least one brake shoe and at least one locking screw screwed through a threaded hole in the brake shoe and coupling the support means to the clamping means.

13. The assembly of claim 1, wherein the support means includes a mounting element and support structure for 65 supporting the mounting element relative to the clamping means, the mounting element being rotatable relative to the

support structure, the assembly further comprising orientation adjustment means for adjusting the rotational orientation of the mounting element relative to the support structure.

5 14. The assembly of claim 13, wherein the support structure includes a shell covering at least a portion of the clamping means and having an opening for exposing the mounting element.

15 15. The assembly of claim 14 wherein the shell substantially encloses the orientation adjustment means.

10 16. The assembly of claim 13, wherein the orientation adjustment means includes rotation guide means guiding rotational movement of the mounting element relative to the support structure and an adjustable screw means coupling the mounting element and the support structure.

15 17. The assembly of claim 13 further including angle locking means for securing the mounting element to the support structure at a given angle.

20 18. The assembly of claim 17, wherein the angle locking means includes at least one locking screw coupling the support structure to the mounting element.

25 19. The assembly of claim 1, wherein the clamping means includes a first clamp element, a second clamp element having two opposite surfaces defining channels of different sizes, and means for securing the first and second clamp elements onto the pole passing through the pole channel with either one of the two surfaces facing the first clamp element for defining the channel.

30 20. An antenna mounting assembly for supporting an antenna on a pole comprising:

pole clamping means defining a pole receiving channel and being capable of being attached to the pole received in the channel;

35 a mounting plate adapted for supporting the antenna thereon;

support means for supporting the mounting plate relative to the clamping means, the mounting plate being rotatable relative to the support means; and

40 orientation adjustment means for adjusting the rotational orientation of the mounting plate relative to the support means, the orientation adjustment means including rotational guide means guiding rotational movement of the mounting plate relative to the support means and an adjustable screw means coupling the mounting plate and the support means.

45 21. The assembly of claim 20, wherein the support means comprises a shell enclosing the clamping means and the adjustable screw means, the shell having a first opening for exposing the mounting plate, and two opposite second and third openings positioned in line with the pole receiving channel.

50 22. The assembly of claim 20, further comprising an antenna base fixedly mountable to the antenna and including a base plate suitable for attaching fixedly onto the mounting plate.

55 23. The assembly of claim 22 further comprising means for attaching the base plate to the mounting plate in different orientations.

60 24. The assembly of claim 23 further comprising means for guiding rotation of the base plate with respect to the mounting plate.

65 25. The assembly of claim 24, wherein the base plate guiding means comprises a pin fixed to the center of one of the base and mounting plates and a hole in the other of the plates sized to receive the pin, the base plate thereby being able to rotate about an axis passing through the pin with respect to the mounting plate.

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26. The assembly of claim 23, wherein the means for attaching the base plate to the mounting plate is adapted for attaching the base plate to the mounting plate in one of at least two oppositely facing orientations.

33. The assembly of claim 32 wherein the locking means 50 includes at least one locking screw coupling the support structure to the mounting element.

34. The assembly of claim 33 wherein the support means 55 includes a shell covering at least a portion of the clamping means and the locking screw secures the mounting element to the shell.

35. An antenna mounting assembly for supporting an antenna on a pole comprising:

pole clamping means defining a pole receiving channel and being capable of being attached to the pole 60 received in the channel; and

support means for supporting the antenna relative to the clamping means, the support means including a shell providing a continuous surface covering at least a portion of the clamping means.

36. The assembly of claim 35 wherein the shell supports the antenna relative to the clamping means.

37. The assembly of claim 36 wherein the shell extends substantially continuously around the clamping means.

5 38. The assembly of claim 35 further comprising:

support guide means coupling the clamping means and the support means for guiding the support means along an arcuate path extending circumferentially around at least a portion of the clamping means; and

10 adjustment means for adjusting the position of the support means along the arcuate path.

39. The assembly of claim 38 wherein the shell encloses the position adjustment means.

15 40. The assembly of claim 38 wherein the adjustment means includes an adjustable lead screw coupling the shell and the coupling means.

41. The assembly of claim 40 wherein the shell encloses the adjustable lead screw.

20 42. An antenna mounting assembly for supporting an antenna on a pole comprising:

pole clamping means defining a pole receiving channel and being capable of being attached to the pole received in the channel;

25 an antenna base fixedly mountable to the antenna and including a base plate having a central hole;

30 a mounting plate adapted for attaching the base plate thereon in different orientations with respect to the mounting plate, the mounting plate including a pin, the central hole of the base plate being sized to receive the pin for guiding rotation of the base plate with respect to the mounting plate about a center axis passing through the pin;

35 a shell for supporting the mounting plate relative to the clamping means, the shell being mounted onto the clamping means in a manner allowing movement of the shell relative to the clamping means along an arcuate path extending circumferentially around at least a portion of the clamping means, the shell enclosing the clamping means and having a first opening for exposing the mounting plate and two opposite second and third openings positioned in line with the pole receiving channel, the mounting plate being rotatable relative to the shell about an axis passing through the mounting plate;

40 orientation adjustment means for adjusting the rotational orientation of the mounting plate relative to the shell, the orientation adjustment means including rotational guide means guiding rotational movement of the mounting plate relative to the shell and an adjustable screw means coupling the mounting plate and the shell;

45 an adjustable lead screw coupling the shell and the clamping means for adjusting the position of the shell along the arcuate path; and

50 means for fixing the position of the shell relative to the clamping means, the fixing means including at least one brake shoe and at least one locking screw screwed through a threaded hole in the brake shoe and coupling the shell to the clamping means.

60 43. The assembly of claim 42 wherein the shell encloses the adjustable lead screw.

44. The assembly of claim 29 wherein said rotation guide means comprises a lever arm secured to said antenna mounting element, and said adjustable screw means
- 5 comprises a screw secured within a nut rotationally secured to said lever arm such that adjustment of said screw causes rotational movement of said lever arm and said antenna mounting element about said rotation axis.